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ABSTRACT

The federally funded Community Mental Health Centers (CMHCs) Program was designed to permit centers the structural flexibility to meet a wide range of local conditions. Although centers differ along many dimensions, it is possible to classify them into two basic structural models based on whether inpatient care is provided by the grantee directly (Inpatient Provider CMHCs) or indirectly through an affiliate (Inpatient Affiliated CMHCs). Changes in funding, clientele, and services from 1971 to 1980 were examined cross-sectionally and with cohorts for Inpatient Provider and Inpatient Affiliated CMHCs. The results indicated that Inpatient Provider CMHCs grew in revenues and shifted from reliance on federal funds to revenues from services and states, while Inpatient Affiliated CMHCs fell in revenues and changed little in their proportional reliance on federal dollars. Inpatient Provider CMHCs also averaged more additions and episodes of care than Inpatient Affiliated centers. Inpatient Affiliated centers grew more from 1971 to 1976, but from 1976 to 1980 Inpatient Provider centers grew, while Inpatient Affiliated centers dropped or grew less. The data support the notion that organizational structure is an important differentiating variable in describing and evaluating federally funded CMHCs. (The appendix contains three tables and nine figures depicting revenue changes and service additions for CMHCs from 1971 to 1980.) (NRB)

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THE CONTRASTING CAREERS OF TWO STRUCTURAL TYPES OF CHIEFS

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FOOTNOTE

The authors are (or, in the case of Beatrice Rosen, recently was) staff of the Survey and Reports Branch, Division of Biometry and Epidemiology, National Institute of Mental Health, Rockville, MD 20857. The views expressed are those of the authors and do not necessarily represent the views of the National Institute of Mental Health. The authors are indebted to Ronald Manderscheid, Ph.D. and James Thompson, M.D. for suggestions. Reprint requests should be addressed to Rosalyn D. Bass, M.P.H., National Institute of Mental Health, Room 18C-07, 5600 Fishers Lane, Rockville, Md. 20857.

ABSTRACT

Changes in funding, clientele and services from 1971 to 1980 were examined cross-sectionally and with cohorts for two types of CMHCs that differ in their structure for providing inpatient service. Inpatient Provider CMHCs grew in revenues and shifted from reliance on Federal funds to revenues from services and States. Inpatient Affiliated CMHCs fell in revenues (in constant dollars) and changed little in their proportional reliance on Federal dollars. Inpatient Provider CMHCs averaged more additions and episodes of care than Inpatient Affiliated CMHCs. Inpatient Affiliated CMHCs grew more from 1971 to 1976, but from 1976 to 1980 Inpatient Provider CMHCs grew, while Inpatient Affiliated CMHCs dropped or grew less. The relatively poor final showing of Inpatient Affiliated CMHCs parallels findings with total revenues.

THE CONTRASTING CAREERS OF TWO STRUCTURAL TYPES OF CMHCs

INTRODUCTION

The federally funded Community Mental Health Centers (CMHC) Program was designed to permit centers the structural flexibility to meet a wide range of local conditions (Levenson, 1969). The resulting wide variation in the organizational composition of CMHCs has been given relatively little attention in national level descriptions or evaluations of this program. Descriptions have usually portrayed, in aggregate, the extent and impacts of the Federal "investment" in the CMHC Program (e.g., National Institute of Mental Health, 1978a). Criticisms have usually been leveled at the program for its departures from the many ambitious goals established for this program (e.g., Chu and Trotter, 1974; Dowell and Ciarlo, 1983, U.S. General Accounting Office, 1974; Windle, Bass and Taube, 1974). Most effort was given to evaluating and assisting either the CMHC Program as a whole (usually through changes in legislation and the establishment of regulations) or individual centers (through site monitoring and technical assistance).

Yet, differences in funding, staffing, service orientation, structural composition and organization, networking with community organizations, and local catchment area conditions are so great that they produce what might be viewed as a host of "natural experiments" in service delivery. The experience of the CMHC Program cannot totally be understood and appreciated without taking these differences into account. This paper seeks to help fill the gap in our knowledge of the CMHC Program by focusing on one source of center variation, namely, structural organization as reflected by whether the center provided inpatient care directly, or indirectly through an affiliation agreement with an administratively separate organization.

As an historical event, the CMHC Program was a unique intervention in the Nation's mental health service delivery system by the Federal Government. The thrust of this intervention was to implement a new philosophical orientation to mental health care with Federal dollars. The substance of the CMHC philosophy has been amply described in the literature (Premo and Wiseman, 1981).

To learn from the history of this Federal effort to alter the mental health service system by seed money funding and to determine the CMHCs' ability to survive under this funding philosophy, it is important to examine changes in the funding, clientele and service delivery of this program over time. The importance of such study is not eliminated by the transfer of the CMHC Program to the States through the Block Grant program (PL 97-35). To the contrary, the shift of this program to the States, makes fifty governments, instead of one, responsible for administering this program. There are also fifty governments faced with the need to modify their own mental health service systems to deal with problem groups such as the chronically mentally ill, the homeless mentally ill, the young chronic patients, and the mentally ill substance abuser. The CMHC experience as a Federal experiment in service system change is pertinent to their planning.

The purpose of this paper is to recognize the structural diversity among CMHCs in an examination of the changes which took place in CMHCs over the past decade with respect to funding patterns, services, and clients.

HISTORICAL PERSPECTIVE

A. Fiscal Resources for CMHCs

The CMHC Program was a Federal initiative in an area of service delivery which had historically been the responsibility of the States. Federal funding

for this program was, however, designed to be only transitory. Early legislation (PL 89-105) provided for Federal seed money with a declining level of support to funded CMHCs over a period of 51 months. During this time, the centers were to develop other sources of funding. It was expected that as the program developed and demonstrated its value, the centers would be able to capture an increasing portion of the traditional funding sources for mental health services, namely State revenue, philanthropy, and out of pocket payment for services, and tap into new revenue sources as Medicaid and Medicare and eventually national health insurance (Starr, 1982). However, CMHCs financial independence from direct, categorical Federal support did not proceed as rapidly as anticipated. CMHC legislation in 1970 (PL 91-211) extended the "weaning" period from five to eight years. Legislation passed in 1975 (PL 94-63) made it possible for CMHCs to further postpone fiscal disengagement from Federal dollars through a variety of new grant categories: for consultation and education services, for conversion to new program specifications, and for "distress."

The ability of centers to find alternative funding sources and the consequences of changes in funding patterns on services have been major foci of NIMH's evaluations of the CMHC Program (Abt Associates, 1977; Macro Systems, Inc., 1973; Stanford Research Institute, 1970; U.S. General Accounting Office, 1974). The results of these studies have been described by Woy, Wasserman and Weiner-Pomerantz (1981). Some of these past studies and the more recent analysis by Woy et al. suggested that centers may fall into types which differ greatly in their ability to move from Federal grant support to other funding sources and as well as in their adherence to the CMHC Program model of services. Centers that shifted to other funding sources departed more from the CMHC model of services than CMHCs which continued to depend on

Federal CMHC grants. Woy et al. (1981) suggested that this difference in both funding and services may be due to the extent to which centers "have strong ongoing ties with organized medicine in general and hospitals in particular" (p. 275), but could not establish a factual basis for this surmise in the small sample of 29 centers they examined.

B. CMHC Structure

While legislation outlined the grant mechanisms and service requirements for CMHCs, the program gave CMHCs wide latitude for structural design. Only for-profit organizations were barred from eligibility for Federal grants. Most CMHCs grew out of existing mental health service organizations. To meet the Federal requirements for a comprehensive array of services, some CMHC grant applicants expanded their own service capacities and assumed responsibility for a catchment area; others entered into affiliation agreements with other mental health organizations in the catchment area to acquire needed service capability; a small number were created de novo with the assistance of construction grant funds under PL 88-164. As centers matured, they broadened their service network to implement CMHC Program objectives such as accessibility and comprehensiveness. They established satellites, outreach programs, and additional affiliates to provide the expanded range of services required in later legislation (e.g., PL 94-63) to meet the variety of needs of their catchment area populations, and to take advantage of State and Federal dollars associated with related programs such as those dealing with alcoholism, drug abuse, developmental disabilities, and social services.

Although centers differ along many dimensions, it is possible to classify them into two basic structural models based on whether inpatient care is provided by the grantee directly, or indirectly through an affiliate. CMHCs

which provide their own inpatient care may be established at a general hospital, a private psychiatric hospital, a State or county mental hospital, or may be a freestanding multiservice facility with its own inpatient capability. We will call these Inpatient Provider CMHCs. Grantees which are not equipped to provide inpatient care themselves and arrange through an affiliation agreement to have this service provided by a hospital, we will call Inpatient Affiliated CMHCs.

Most Inpatient Provider centers are parts of general hospitals. For this analysis, freestanding centers have been combined with general hospital-based centers since they both provide inpatient care directly. Analyses of data from CMHCs reported in 1976 (NIMH, 1978b) suggest that freestanding CMHCs differ from Inpatient Affiliated centers in the same way as do general hospital-based centers, but not as markedly. Hence, their inclusion with general hospital-based centers will lessen differences between the two CMHC structural models defined here.

Because the few centers that are parts of public or private psychiatric hospitals differ so widely from the other Inpatient Provider centers with respect to staffing, sources and amounts of revenue, and caseload, we excluded them from the present analysis. They form a small group of outliers which, unfortunately, are too few to examine as separate groups. In addition, over the past decade they have become a decreasing proportion of all centers (see table 1).

The organizational difference between Inpatient Provider and Inpatient Affiliated centers also has implications for data collection and analyses. The Inpatient Provider center defines itself as having an inpatient unit and hence reports the staff and revenues from an inpatient service; the Inpatient Affiliated center does not administer an inpatient unit and therefore has

neither an inpatient staff nor inpatient revenues to report. At best, the Inpatient Affiliated center can realize some inpatient revenues from staff visits to its hospitalized patients. In addition to real differences in functioning, there may be differences in the extent to which CMHCs can report the activities they carry out and those carried out by their affiliates. Since Inpatient Affiliated centers have more affiliates than Inpatient Provider centers, and affiliates are less likely than grantees to have their data reported on the NIMH inventory, it is likely that the two types of centers differ in their underreporting tendencies. This difference is increased by what appears to be a slight but consistent tendency for fewer of the affiliates of Inpatient Affiliated centers to report numbers of additions to services they provide than was the case for the affiliates of Inpatient Provider CMHCs. Reporting differences between these two CMHC models complicates comparisons between them, however, this complication is less for longitudinal than cross-sectional comparisons.

The distributions of centers by their organizational model at different times in the life of the CMHC Program are shown in table 1. The majority of centers are Inpatient Affiliated and the preponderance of this model has increased over time. In the early years of the CMHC Program, changes in the organizational composition of the program were due to the addition of new centers. However, changes between 1973 and 1981 are due to both the addition of new centers and the attrition of the earliest funded centers. Centers which "graduated" from Federal funding discontinued participation in the CMHC reporting program to NIMH.

INSERT TABLE 1 ABOUT HERE

A second feature to observe in the table is that the increase in the proportion of Inpatient Affiliated centers from 1969 to 1981 is balanced by

the decrease in the proportion of State and county and private psychiatric hospital-based centers. Although there was some increase in the proportion of both general hospital-based and freestanding centers from 1969 to 1974, this trend was reversed for general hospital-based centers from 1974 to 1981.

METHODOLOGY

All data reported in this paper are from the National Reporting Program operated by the Survey and Reports Branch of the National Institute of Mental Health (NIMH). Data quality in this National Reporting Program is obtained by subjecting each inventory to a series of stringent edits as part of the data processing procedures. The data analyzed in this paper were reported by individual centers, subjected to edit checks and judged internally consistent. These data do not include imputations for item or case nonresponse, but are limited to data reported by respondent centers.

For this study, respondent data for Inpatient Provider and Inpatient Affiliated centers were compared for three years: 1971, 1976, and 1980. Since these two organizational types differ in number over time, the unit of comparison in this paper is average value per center.

The trend information provided by cross sectional data at three points in time was supplemented by an analysis of cohort data, that is, data from the same set of centers over time. Doing both analyses permits us to differentiate between changes in the program that are a function of maturation by a given group of centers and those that are a function of changes in the population of centers reporting in different years. To cover the period between 1971 and 1980, a cohort of all centers that responded to the data items of interest for the three time periods, 1971, 1976 and 1980, was used.

The comparability of data across time needs to be discussed, since

changes from prior years were made in the 1980 Inventory with respect to client and service data. Aggregate client data subdivided by age, race, and diagnosis are reported on the Inventory for "additions" (i.e., admissions and readmissions) during the reporting year. Until 1980, additions were defined as an unduplicated count of persons admitted to any part of the network of mental health organizations comprising the CMHC. The Inventory was modified in 1980, and additions were redefined as the duplicated count of persons admitted to that portion of the CMHC administered by the grantee. Thus the demographic characteristics of direct admissions to CMHC affiliates (i.e., mental health facilities, independent of the grantee organization, that provide service for the CMHC under a written agreement or contract were excluded. Because Inpatient Affiliated CMHCs are not comprehensive networks when separated from the hospital affiliate, we considered the possibility that the change in inventory instructions would selectively disadvantage this group of CMHCs. Experience in editing CMHC inventories, however, suggests that the change in instructions did not result in appreciable changes in reporting patterns. Many affiliates receive most, if not all, CMHC clients through referral from the grantee. Hence, most additions to affiliates would first have been admitted to the CMHC grantee and reported by the grantee in the count of additions. For CMHCs which permit entry into the CMHC through an inpatient affiliate it is highly likely that such clients would be referred to the CMHC grantee to following an episode of inpatient care, and hence be reported by the grantee in their count of additions. In short, the instructions to restrict the count of additions to the grantee probably did not alter the response pattern of Inpatient Affiliated CMHCs with respect to the number or characteristics of additions.

The likely impact of the change in instructions for a duplicated versus

an unduplicated count is more difficult to sort out. Prior to 1980, strenuous efforts were made to obtain from each CMHC an unduplicated count of additions during a reporting year. The success of this effort was, however, never validated by audit. There is no reason to suspect that a systematic bias exists such that any type of CMHC was more or less likely to respond as instructed with an unduplicated count of additions. Thus, although 1980 reporting of additions might be somewhat inflated compared to previous years, this inflation is not likely to favor either type of CMHC.

Services are reported in the inventory in terms of patient care episodes for specific program elements (e.g., inpatient, outpatient, partial and residential care). A patient care episode is defined as a period of treatment provided within a program element begun by an admission or transfer into that program element and ending with a discharge from or transfer to another program element. A count of patient care episodes for a year is a duplicated count of persons and is calculated by summing the number of persons in treatment at the beginning of the year and the number of admissions, readmissions and transfers to a specific program element during the year.

The data on episodes are based on reported data for both the grantee and all reporting affiliates. Before 1980, episode data were reported directly by the CMHC as a single figure for its entire network. For 1980, CMHCs were requested to report episode data only for the grantee; other data from which episodes can be calculated were requested for each affiliate. The specific operations used to calculate episodes are described in Appendix A.

The change in the form for 1980 to collect information separately for grantees and affiliates permits us to see the extent of underreporting for affiliates. No data on numbers of additions were reported for about half of the affiliates that CMHCs claimed were providing particular services. This

underreporting was somewhat higher for Inpatient Affiliated than Inpatient Provider CMHCs. We believe that similar levels of underreporting existed in prior years, and that therefore comparisons of trends for the different types of CMHCs will be little affected. The nonresponse rate for services by grantees was considerably lower than that for affiliates. For no program element for any of the 3 years examined did fewer than 75 percent of the CMHCs provide episode or addition data for the grantee. For no type of episode other than inpatient is affiliate underreporting a serious concern, since the bulk of the other types of episodes are given by grantees rather than affiliates. This is not true of inpatient episodes in Inpatient Affiliated CMHCs, making these data of uncertain representativeness. However, even for inpatient care, concern about affiliate underreporting should be moderated by recognizing that some affiliation agreements exist as potential rather than realized arrangements. Thus, lack of data may indicate lack of use of the affiliate or lack of integration of the affiliate into the CMHC network.

Consultation and education (C&E) activities were collected prospectively by the CMHCs for a designated month after receiving the Inventory form, and are reported by types of recipients. Thus, C&E services cover a period in the year following that for which most service data were reported.

Finally a comparability feature that should also be recognized is that NIMH shifted in 1980 from using NIMH employees to using a contractor to manage the survey and edit the inventory forms. What, if any, differences resulted from this shift have not been assessed.

Because this study uses data for entire populations of CMHCs in various years, descriptive rather than sampling statistics are appropriate. Thus, no tests of statistical significance of differences are employed; the relevant criterion is size rather than reliability of differences.

RESULTS

A. Sources of Funds

1. Cross-sectional trend data. Inpatient Provider centers reported considerably more average revenue from almost all sources and for all time periods than did Inpatient Affiliated centers. The only exceptions were for State government funds in 1971, and in 1976 and 1980 for the category of "other" revenues from services.

INSERT TABLE 2 ABOUT HERE

Between 1971 and 1976, the two types of centers increased in average total revenue at about the same rate, but from 1976 to 1980, the Inpatient Affiliated CMHCs increased less than Inpatient Provider CMHCs, both absolutely and relative to their levels in 1976. Over the 9 year period, consequently, Inpatient Provider CMHCs gained more than Inpatient Affiliated CMHCs, both absolutely (an increase of $1.88 million vs. $0.88 million in average revenues per center) and relatively (an increase of 151% vs. 101%).

The practical implications of this differential increase in revenues are more evident when the revenue figures are corrected for inflation using the medical care component of the Consumer Price Index, with 1971 as the base year (see figure 1). The increase in average total revenues for Inpatient Provider CMHCs from 1971 to 1980 meant an increase in purchasing power; for Inpatient Affiliated CMHCs, the increase in purchasing power extended only to 1976. By 1980, average total revenues in constant dollars dropped to a level below that in 1971.

INSERT FIGURE 1 ABOUT HERE

These two types of centers are further differentiated by the patterns of growth for major categories of funding sources. Inpatient

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Provider CMHCs show, in constant dollars, a steady decline in Federal revenues counterbalanced by increases in average revenues from services and from the State. This pattern is consistent with the seed money concept of replacing Federal funds with other revenues. Inpatient Affiliated CMHCs present a quite different picture. In constant dollars, average Federal dollars remained stable between 1971 and 1976, dipping modestly by 1980. Average State dollars and revenues from services increased modestly by 1976, but failed to continue this increase to 1980.

Closer scrutiny of the different sources of revenue from services reveals patterns which further differentiate the two CMHC organizational types (see Figure 2). Inpatient Provider CMHCs grew continuously in average revenue in constant dollars for the third party payors, viz., Medicare, Medicaid, and insurance. Inpatient Affiliated CMHCs showed an upward trend only for reimbursements from Medicaid, and that trend failed to continue past 1976 to 1980. For Inpatient Affiliated CMHCs, insurance and Medicare are not increasing sources of revenue in constant dollars.

Insert Figure 2

Neither type of center did well with patient fees as a source of revenue. Centers' innovation in seeking alternative funding sources (other than insurance, Medicare and Medicaid) to permit disengagement from Federal support is not well documented by the CMHC Inventory. All that is available is a category of "other" revenues for services. This category reflects centers' success in tapping into more unusual sources of revenue such as revenues from indirect services (e.g., consultation, staff education, and public information and education), Title XX dollars, and reimbursements for diagnostic, consultation and treatment services under contracts, e.g., with

schools, courts, businesses, vocational rehabilitation departments, etc. In these efforts, the Inpatient Affiliated CMHCs were more successful than Inpatient Provider CMHCs in both absolute and relative terms (see table 2).

In interpreting these trends, it is important to remember that these data are cross-sectional, and therefore reflect an increasing universe of centers. Since new centers receive a higher proportion of their revenue from the Federal CMHC grant, comparisons of funding sources are sensitive to centers' age. As long as the universe of Inpatient Provider and Inpatient Affiliated Centers changes at the same rate, comparison between these types of CMHCs is unaffected. While the proportion of Inpatient Provider and Inpatient Affiliated CMHCs remained similar between 1971 and 1976, a disproportionately large number of new CMHCs in 1980 were Inpatient Affiliated (see table 1). This recent change in the proportion of Inpatient Affiliated and Inpatient Provider CMHCs is consistent with and therefore might account for, the failure of Inpatient Affiliated centers to demonstrate the same growth as Inpatient Provider centers. To examine this possibility, cohort data were examined.

2. Longitudinal cohort data. The cohort consisted of all centers funded prior to 1971 that reported revenue data for 1971, 1976 and 1980. Twenty-eight Inpatient Provider centers and 79 Inpatient Affiliated centers met this criterion. The cohort data confirm the differences between the Inpatient Provider and Inpatient Affiliated CMHCs found for cross-sectional data. This can be seen by comparing figures 1 and 3 (cross-sectional and cohort data, respectively, for the major funding categories) and figures 2 and 4 (cross-sectional and cohort data, respectively, for the categories of receipts from services).

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INSERT FIGURES 3 AND 4

Because the cohort which spanned the three observation periods was small, two other cohorts were examined: (a) the 51 Inpatient Provider and 116 Inpatient Affiliated CMHCs that reported sources of revenue for 1971 and 1976; and (b) the 72 Inpatient Provider and 202 Inpatient Affiliated CMHCs reporting for 1976 and 1980. These two cohorts provided larger samples for each interval, even though neither gave a single picture for the entire 9 year period because of their changing composition. These 2 cohorts showed trends similar to those reported for the single cohort for the periods 1971-1976 and 1976-1980.

Thus, the contrasting trends in revenues between Inpatient Provider and Inpatient Affiliated CMHCs do not seem to be an artifact of the changing population of CMHCs, but reflect a real difference in the trends for these two structural types of CMHCs.

B. Client Data

1. Cross-sectional trends

a. Number of additions. Inpatient Provider CMHCs differ from Inpatient Affiliated CMHCs with respect to the average number of additions per CMHC and the growth pattern for additions. The average number of additions per Inpatient Provider CMHC exceeded the average per Inpatient Affiliated CMHC by 38 percent in 1971 (1,769 as compared to 1,281, respectively) and by 54 percent in 1980 (2,604 as compared to 1,695, respectively), although these differences almost disappeared in 1976 (see figure 5). The major increases in additions took place from 1971-1976 for Inpatient Affiliated CMHCs and from 1976-1980 for Inpatient Provider CMHCs. In sum, the trends over time for the two types of CMHCs showed a pattern of convergence in numbers of additions from 1971 to 1976, followed by even greater divergence from 1976 to 1980.

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INSERT FIGURE 5 ABOUT HERE

b. Characteristics of additions. In order to reduce repetition, the presentation of results will focus on variations for various subgroups of additions from the pattern seen in all additions.

(1) Age. The age distributions of additions for the two types of CMHCs are virtually the same in 1971, and the general pattern shown in figure 5 for the two types of CMHCs is repeated for each major age group (viz., under 25, 25-44, 45-64, and 65 and over). However, both types of CMHCs changed from 1971 to 1980 in the overall age distribution of additions. The percent of additions under 25 years of age dropped from 42 percent to 35 percent for Inpatient Provider CMHCs and from 44 percent to 41 percent for Inpatient Affiliated CMHCs. For both types of CMHCs, the greatest percentage gain occurred in the 25-44 age group. These changes in age distribution are only partially consistent with the changes in the age distribution of the U. S. population (Bureau of the Census, 1982). The total U. S. population under 24 years of age remained about the same between 1970 and 1981, but decreased in the number between 5 and 14 and increased in the number between 15-24. Since CMHCs serve 15-24 year olds at a much higher rate than those under 15 (NIMH, 1981), this shift would be expected to increase, not decrease, the number under 25 likely to be served by CMHCs. On the other hand, the 25-44 age group in the U.S. increased greatly. The increased percentage of CMHC clients that fall in this age group is therefore expected.

(2) Diagnosis. Little trend information about diagnosis is available because the 1980 inventory used quite broad diagnostic categories, including one that combined undiagnosed clients and clients with "no mental

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disorder." Deviations from the general pattern of trends for the two types of CMHCs were as follows (see figure 6): (1) additions to Inpatient Affiliated CMHCs with "mental illness" and with "alcohol disorder" increased slightly from 1976 to 1980. (2) Additions with mental retardation dropped slightly in Inpatient Affiliated CMHCs from 1971 to 1976. (3) The number of "no mental disorder and undiagnosed" additions dropped sharply from 1976 to 1980 for the Inpatient Provider, as well as the Inpatient Affiliated CMHCs. This striking decrease in undiagnosed additions and those with no mental disorder could have been the result of increased efforts by CMHCs to realize reimbursements from services, a process that requires a diagnosis.

INSERT FIGURE 6 ABOUT HERE

(3) Race. The general pattern of more additions per CMHC in Inpatient Provider than Inpatient Affiliated CMHCs, with convergence in 1971-76 and divergence in 1976-80, holds for both whites and nonwhites (see figure 7). However, while there is growth from 1971 to 1980 in both types of CMHCs for white additions, the average number of nonwhite additions was about the same in 1980 as in 1971. As a consequence of these differences in trends over the nine year period, Inpatient Provider CMHCs changed from serving more nonwhites (27 percent) than Inpatient Affiliated CMHCs (18 percent) to serving about the same proportion (19 percent and 17 percent respectively.)

INSERT FIGURE 7 ABOUT HERE

2. Longitudinal cohort data

a. Number of additions. Because there were relatively few CMHCs that reported additions for all 3 years of 1971, 1976 and 1980, the cohort analysis was done by using different cohorts of CMHCs to compare the changes between 1971 and 1976 and between 1976 and 1980. This comparison showed a pattern similar to that found in the cross-sectional comparison (see figure

5), except that the cohort of Inpatient Affiliated CMHCs increased modestly in numbers of additions from 1976 to 1980, instead of decreasing as was observed in the cross-sectional data. This suggests that the decrease in additions between 1976-1980 found in the cross-sectional data may be explained by the addition of new and smaller CMHCs, and that existing Inpatient Affiliated CMHCs continued to grow, albeit modestly. As was found in the cross-sectional analysis, Inpatient Provider CMHCs increased more than Inpatient Affiliated CMHCs in this time period.

b. Characteristics of additions. The general pattern found for total additions in the cohort applied to most subgroups of additions. The major exception was for the racial subgroups (see figure 8). The pattern of changes for the racial subgroups in the cohorts is the same as for all additions to the cohorts. However, there are also large differences in 1976 between the 1971-76 cohorts and the 1976-80 cohorts, and these differences differ greatly between racial groups and CMHC types. These differences suggest that the Inpatient Provider CMHCs that opened between 1971 and 1976 were larger than those that opened earlier than 1971 (i.e., they had more total additions), but were perhaps located in areas with fewer nonwhites than earlier CMHCs.

INSERT FIGURE 8 ABOUT HERE

C. Services

1. Cross-sectional trends

(a) Direct. The pattern for patient care episodes is shown in Figure 9. Just as with the pattern for additions, Inpatient Provider CMHCs increased steadily in outpatient, partial and residential care episodes, while Inpatient Affiliated CMHCs showed the same fluctuating pattern described for

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additions.

For both types of CMHCs the trend for inpatient care differs from that for the other services. However, the large amount of underreporting of this service by Inpatient Affiliated CMHCs makes confidence in this result too low to warrant interpretation.

INSERT FIGURE 9 ABOUT HERE

(b) Indirect. In contrast with trends in direct services, the quantity of the indirect service, namely consultation and education (C&E), dropped throughout the decade of the 1970's. Also unlike the pattern for direct services, this drop was steeper for Inpatient Provider than Inpatient Affiliated CMHCs. In 1971, the average Inpatient Provider CMHC provided about 10 percent more time for C&E than did the average Inpatient Affiliated CMHC (see table 3). By 1976, this difference had disappeared. This translates into a decrease for Inpatient Provider CMHCs from 4.4 full time staff providing C&E in 1972 to 2.3 full time staff in 1981. The drop in Inpatient Affiliated CMHCs is from 4.0 to 2.3 staff.

The distribution of C&E across recipients changed differentially for the two types of CMHCs, but in a fashion that eliminated the marked differences that existed in 1972. In 1972 Inpatient Provider CMHCs provided less C&E to schools than Inpatient Affiliated CMHCs (26 percent compared to 36 percent), but by 1981 both types of CMHCs gave about the same attention to schools.

INSERT TABLE 3 ABOUT HERE

2. Longitudinal cohort data. Cohort data showed the same trend patterns as cross-sectional data reported above for direct and indirect

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services.

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DISCUSSION

The data presented here support our belief that organizational structure is an important differentiating variable in describing and evaluating federally funded CMHCs. Organizationally, Inpatient Provider CMHCs are complete service networks, capable of providing the basic five essential services mandated in the original CMHC legislation viz., inpatient, partial, outpatient, emergency care and consultation and education. They enter the CMHC Program as larger, more complete entities and with the sophistication and prestige associated with facilities in the medical care sector. In terms of revenues, they start bigger and grow more (see table 2). In addition, they are able to decrease their dependency on Federal grant support and turn successfully to other funding sources, particularly revenues from services.

By contrast, Inpatient Affiliated CMHCs are relatively recent developments in the mental health care system. They are handicapped by their lack of an inpatient unit which is both an additional source of revenue and a link to the medical care system toward which the system of reimbursements by third party payors is geared. To achieve the same level of comprehensiveness of service as Inpatient Provider CMHCs, the Inpatient Affiliated CMHCs centers must link (affiliate) with general hospitals or send their patients to the State mental hospitals. This organizational and geographic decentralization adds an extra burden to these centers to provide continuity of care. CMHC reporting to NIMH is inadequate for measuring the extent to which such arrangements result in patient dropouts following an episode of inpatient care, with a resulting loss of revenues to these centers. Admittedly, the results presented in this paper have been influenced by the differences in

reporting between the Inpatient Provider and Inpatient Affiliated CMHCs. Revenues from the inpatient service are included in the reporting by Inpatient Provider CMHCs and not in the reporting by Inpatient Affiliated CMHCs; moreover the latter are frequently unable to report utilization of inpatient services provided by these affiliate hospitals. This might be regarded as a serious confound in our comparisons. On the other hand, it is consistent with our main thesis that these two types of CMHCs are different types and should be reported and analyzed separately.

In 1975, Congress passed PL 94-63 which introduced a variety of new grant mechanisms for funding CMHCs and raised the number of services required of CMHCs from 5 to 12. It was the Inpatient Affiliated CMHCs which took advantage of these grant mechanisms and their cohort data reveal an increase in average Federal dollars in 1976 as compared to 1971, while average Federal dollars per center for Inpatient Provider CMHCs showed the decline anticipated from the declining formula applied to Federal support. In other words, Inpatient Provider CMHCs moved toward independence of Federal support and toward financial viability more readily than did Inpatient Affiliated CMHCs.

The growth patterns differentiating Inpatient Provider and Inpatient Affiliated CMHCs were the same for total revenues and services, as measured by both additions and episodes of care. That is, there is a consistent increasing trend between 1971 -1980 for Inpatient Provider CMHCs and an up-and down-trend for the Inpatient Affiliated CMHCs during this period. In addition, Thompson and Bass (in press) found the same differentiating pattern applied as well to trends to staffing. This parallel is consistent with the common sense assumption that revenues, services, and staff size are related, and therefore gives us more confidence in the results.

The general similarity in trends for the cohort and cross-sectional data

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indicates that the difference between CMHC structural types is not an artifact of the disproportionate increase in numbers of Inpatient Affiliated CMHCs in 1980.

If we interpret the relative decrease in services by Inpatient Affiliated CMHCs from 1976 to 1980 to reflect difficulty in obtaining funding, we might ask what types of clientele bear the brunt of service limitations. The above analysis suggests that while over the whole program there is a reduction in direct patient services, these services are not being cut disproportionately for particular types of clients. Similarly, while there appear to be overall trends toward decreasing proportions of additions under 25 years of age and increases in the proportion of additions diagnosed as having an alcohol disorder, there do not appear to be strong, consistent trends for the distribution of client demographic and diagnostic characteristics to be affected by the differential growth of Inpatient Provider and Inpatient Affiliated CMHCs.

The fact that the trend in direct client services is not also evident in indirect services is not surprising. Those services differ greatly from direct services in ideological underpinnings (Robin and Wagenfeld, 1982), in methods of funding and in size. The difference is evident in their opposite growth patterns. As direct services generally grew (except for Inpatient Affiliated CMHCs from 1976 to 1980), C&E fell. This contrast occurred for the cohorts as well as the cross-sectional comparisons. This drop in C&E service has been observed by others (Woy et al., 1981; Jerrell and Larsen, 1983). The greater decrease by Inpatient Provider CMHCs may reflect their decreased reliance on Federal funds, which were the main support for C&E, since fees for this service were hard to obtain.

The finding of major differences in funding, caseload, and service

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statistics for CMHCs differing with respect to structural characteristics has profound methodological implications relating to the analysis and evaluation of the CMHC Program. The CMHC Program has been criticized for its limitations both as an agent of social reform (e.g., Chu and Trotter, 1974) and as an exemplar of higher quality service (Langsley, 1980; Mollica, 1983); it has also been criticized for its great breadth and lack of focus (Buchanan and Wholey, 1972). Research on complex phenomena or concepts seems often to move forward by focusing on homogeneous, specifiable and therefore replicable subgroups. This approach is being used to better understand a particular mental health problem in the NIMH supported collaborative studies of depression (Waskow, 1982). Similar focus should be applied to the study of service programs. The heterogeneity of the CMHC Program, where the major common element was Federal funding in a Federally promoted, locally-responsive, flexible program, thwarts meaningful description and understanding. The findings of the present paper suggest a basis for increasing the homogeneity of the units studied in evaluation of the CMHC Program, namely CMHCs of particular organizational structures. For example, past evaluations of the CMHC program (Williams, and Light, 1982) might be re-examined to see whether control for CMHC structure alters the findings.

The present results may also have action implications. This study examined services in the 1970's when the major pressures on CMHCs stemmed from their Federal funding status. Since the 1970's, the CMHC Program as a whole has been shifted to State control, and many States have experienced economic adversity. Thus, problems in adequately supporting services are likely to persist in the 1980s, and planning and administrative oversight responsibility will fall largely on States and communities.

The finding that reductions in service are more likely in Inpatient

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Affiliated CMHCs suggests that State and county managers of mental health service programs need to give these CMHCs special attention to ensure that they continue serving their communities. Another implication might be that since Inpatient Affiliated CMHCs appear to be less successful than the Inpatient Provider CMHCs, planning for new centers or for the redesign of old centers might give priority to an Inpatient Provider structure. This was not the trend of the CMHC Program in 1980, since a disproportionately high number of the new CMHCs that year were Inpatient Affiliated. How easy it is for a CMHC to change its structure is not clear. While some CMHCs have changed their structure, the frequency of such change, the reasons behind it and the impacts on services have not yet been studied. Since a large part of the impetus for affiliation among service-providing facilities in the CMHC Program was to meet Federal CMHC Program requirements for comprehensiveness, the future of organizations composed of formally but loosely affiliated parts is in doubt.

How far the present findings generalize to other types of service facilities is not clear. If these findings about the importance of organizational structure apply to the types of organizations that were grantees, usually hospitals for Inpatient Provider CMHCs and outpatient clinics for Inpatient Affiliated CMHCs, one might expect similar differences in the relative growth of these two major types of service facilities.

Jerrell and Larsen (1983) have identified a number of recent changes in a sample of CMHCs, and we suspect that other research on the impact of Block grants, deinstitutionalization or reinstitutionalization, various forms of competition in service delivery, cost containment strategies, and other topical policy issues will also examine trends in CMHCs and their organizational structure. The present study suggests that it will be useful

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to analyze such data according to the structural models identified here.

A second type of action implication of the present study is to prompt more detailed study of why the organizational structure of CMHCs is important for their growth and/or survival. The specific policies that CMHCs adopt, the consequences of these policies, and the factors that lead to policy choice should be studied to link CMHC structure with community service growth or decline.

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APPENDIX A

Inpatient and residential episodes were calculated as the number of additions to each service plus the average daily census for the year for the respective service. Partial care episodes was defined as number of additions to partial care plus the number of partial care sessions divided by 261, the number of week days in a year. Outpatient episodes for grantees were calculated as discontinuations from outpatient care during the year plus the number on the rolls at the end of the year. Outpatient episodes for affiliates had to be estimated from data on additions to outpatient care in affiliates. Under the assumption that the ratio of additions to episodes in the affiliates is the same as in the grantees in a given type of CMHC, episodes were calculated from the ratio of additions to episodes by the grantees of all CMHCs in the group being examined.

Table 1
Percent distribution of CMHCs* by organizational structure, 1969-1981

Organizational Type of CMHC	Year					
	1969** (N=145)	1971** (N=262)	1974** (N=441)	1977 (N=535)	1978*** (N=591)	1981 (N=701)
CMHCs — All Types	100%	100%	100%	100%	100%	100%
Inpatient Affiliated	61%	62%	61%	64%	67%	70%
Inpatient Provider						
General hospital based	17	17	20	18	17	15
Freestanding	10	13	14	13	14	13
State/county psychiatric hospital based	7	4	3	3	1	1
Private psychiatric hospital based	5	4	2	2	1	1

*Excludes Puerto Rico, Guam and Virgin Islands.

**Data on organizational models were not collected for 1969-1974. Information for these years is based on 1977 reports by centers in operation in 1969, 1971 and 1974, respectively.

***There was no survey of all centers in 1978. Information for 1978 is based on 1981 reports by centers in operation in 1978.

Table 2
Average revenue per center, by source of revenue, for Inpatient Provider and Inpatient Affiliated federally funded community mental health centers, United States 1971, 1976 and 1980

Sources of revenues	Inpatient Provider CMHCs			Inpatient Affiliates CMHCs		
	1971 (N=57)	1976 (N=137)	1980 (N=135)	1971 (N=134)	1976 (N=298)	1980 (N=391)
	Average revenue per CMHC in $000's					
Total revenue from all sources	1,240	1,960	3,116	866	1,440	1,744
Total Government Funds	902	1,165	1,826	666	1,035	1,270
Federal Government	460	488	533	304	437	477
State government	280	479	1,056	290	465	606
Local and other government[1] ...	163	198	237	72	134	187
Total revenue from services	294	731	1,251	167	356	451
Patient fees	64	83	139	54	54	63
Insurance	102	243	404	50	57	40
Medicare	20	77	172	16	19	12
Medicaid	85	248	372	35	122	147
Other[2]	23	77	164	13	104	185
Other revenue[3]	44	64	39	32	49	28

[1]Funds classified as "other government" are those which, for lack of sufficient information, cannot be classified in one of the other categories of government funds. These have been combined with revenues from local government.

[2]This category of other revenues from services contains reimbursements under Title XX; revenues from consultation and education and public information and education; and from service contracts with schools, courts, businesses, etc.

[3]Other revenues are comprised of philanthropy, fund-raising activities, sales, etc.

Table 3
Average amount and percent distribution of consultation and education by CMHCs in a sample month, by type of recipient, CMHC organizational type, and year*

	CMHC Organizational Type					
	Inpatient Provider CMHC			Inpatient Affiliated CMHC		
	1972	1977	1981	1972	1977	1981
Average C&E staff hours per CMHC per month	705	465	36	632	487	363
No. of CMHCs reporting	71	146	158	148	299	431
C&E Recipient			**Percent Distribution**			
Total	100%	100%	100%	100%	100%	100%
Law enforcement	6	8	9	7	9	8
Mental health organizations	9	7	8	7	6	9
Other health organizations	12	8	11	11	8	10
Schools	26	25	27	36	34	24
General Public	9	16	19	9	12	24
Other	38	36	26	30	31	25

*C&E data and direct service data are reported for different years. The Inventory requests C & E data to be collected prospectively for one month and direct service data to be reported for the previous year.

Figure 1
Average revenues from services in constant dollars (base year = 1971), by CMHC organizational type, cross-sectional view, 1971-1980.

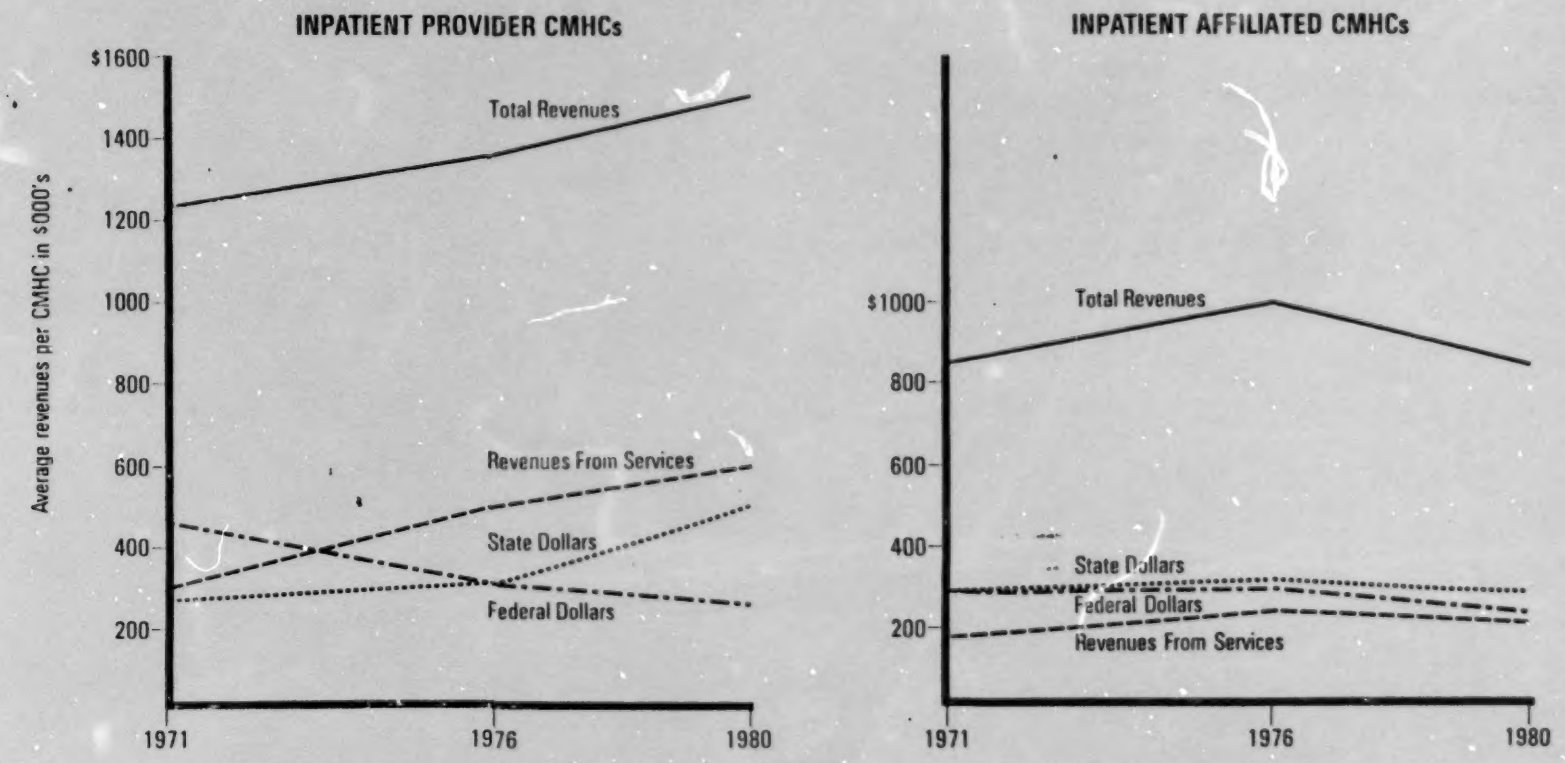

Figure 2
Average revenues per CMHC in constant dollars (base year = 1971), organizational type, cross-sectional view, 1971-1980.

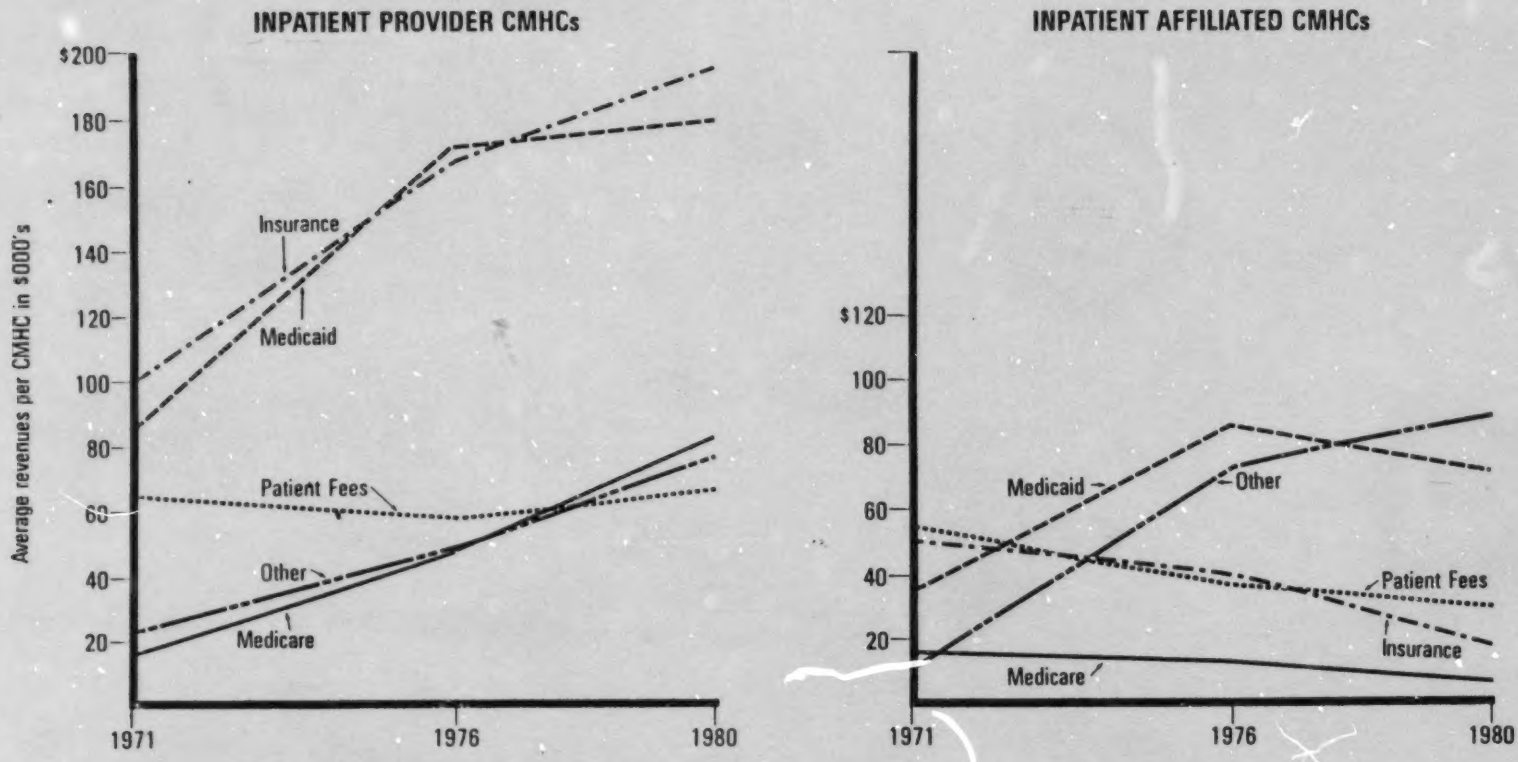

Figure 2
Average revenues per center in constant dollars, (base year = 1971), for 2 cohorts of CMHCs differing by organizational type, 1971-1980.

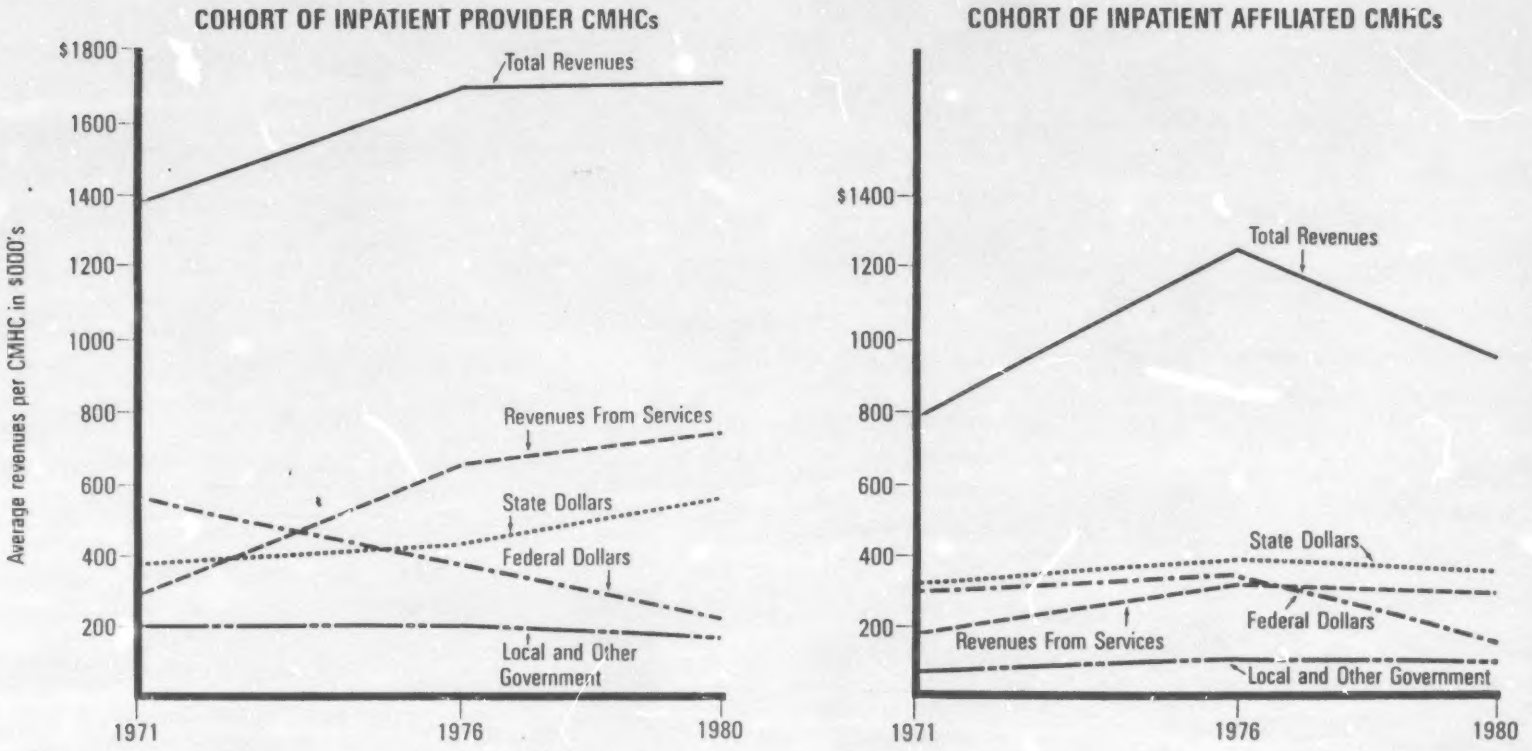

Figure 4
Average revenues from services in constant dollars, (base year = 1971), for 2 cohorts of CMHCs differing by organizational type, 1971-1980.

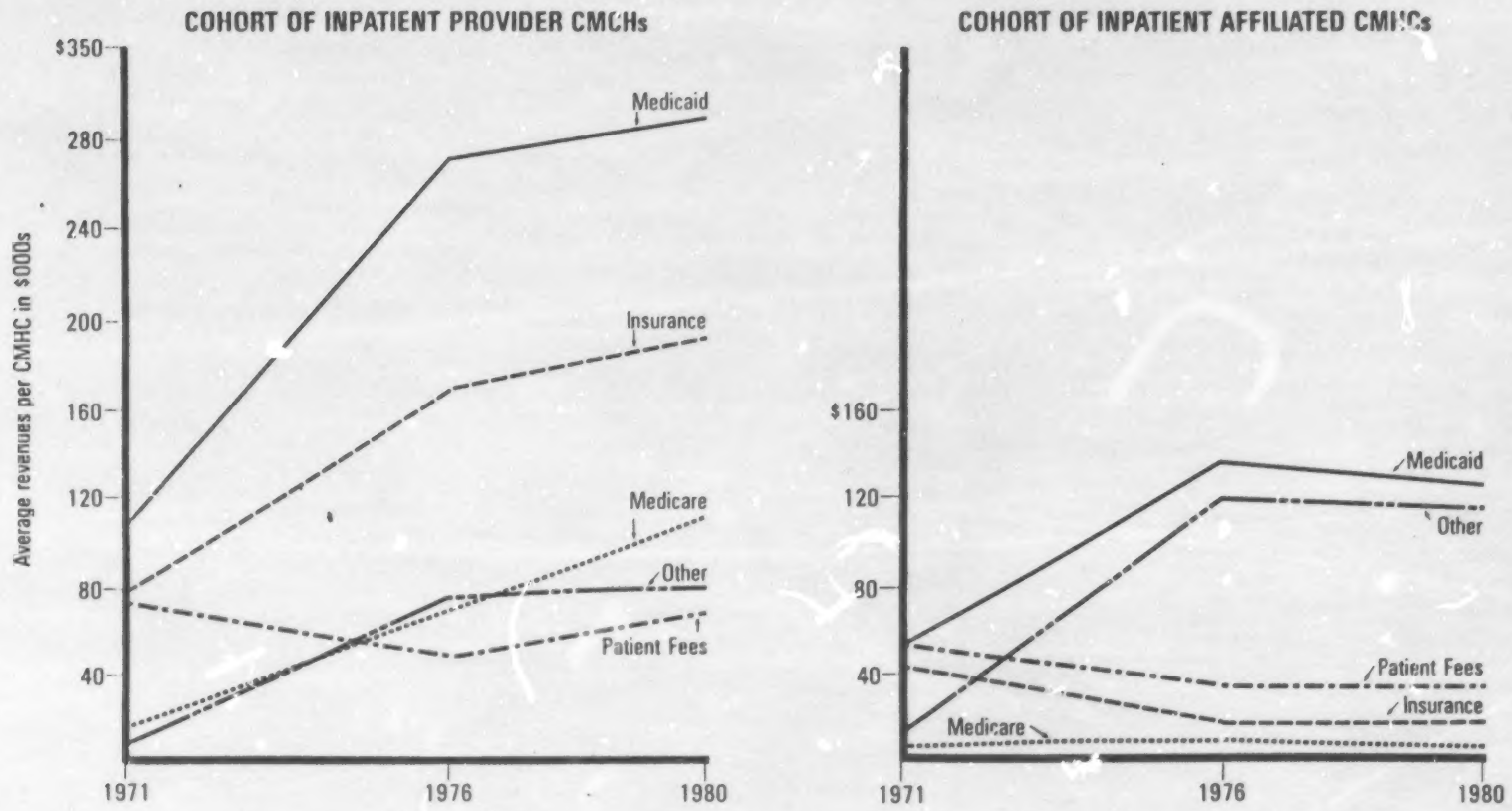

Figure 5
Average number of additions per CMHC, by organizational type and year.

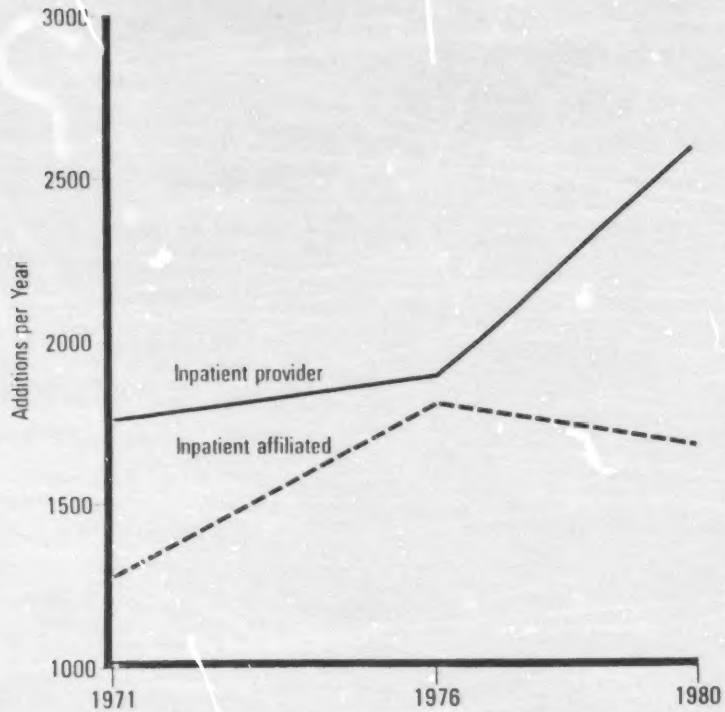

Figure 6
Average number of additions per CMHC, by organizational type, year, and client diagnosis.

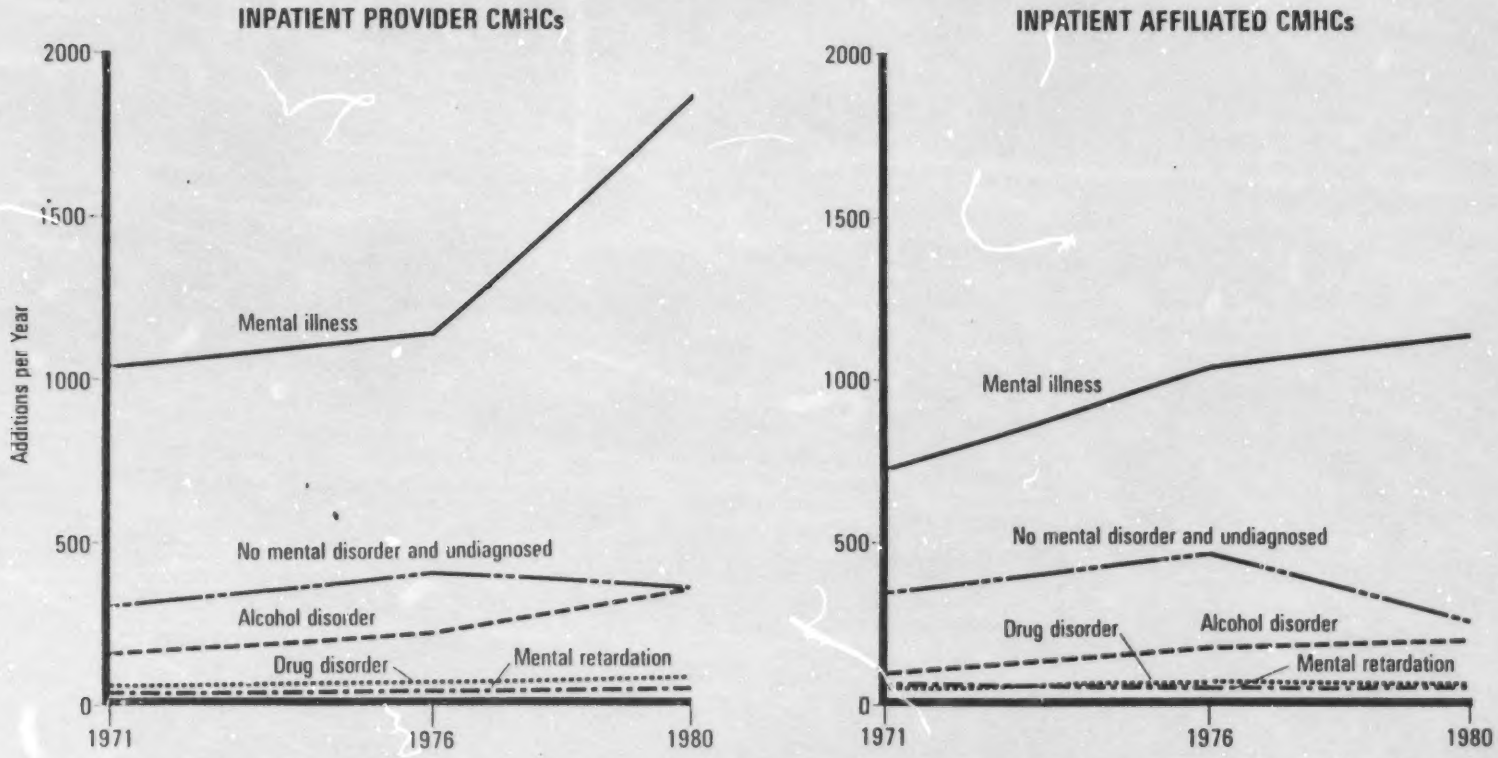

Figure 7
Average number of additions per CMHC, by organizational type, year, and client ethnicity: cross-sectional data.

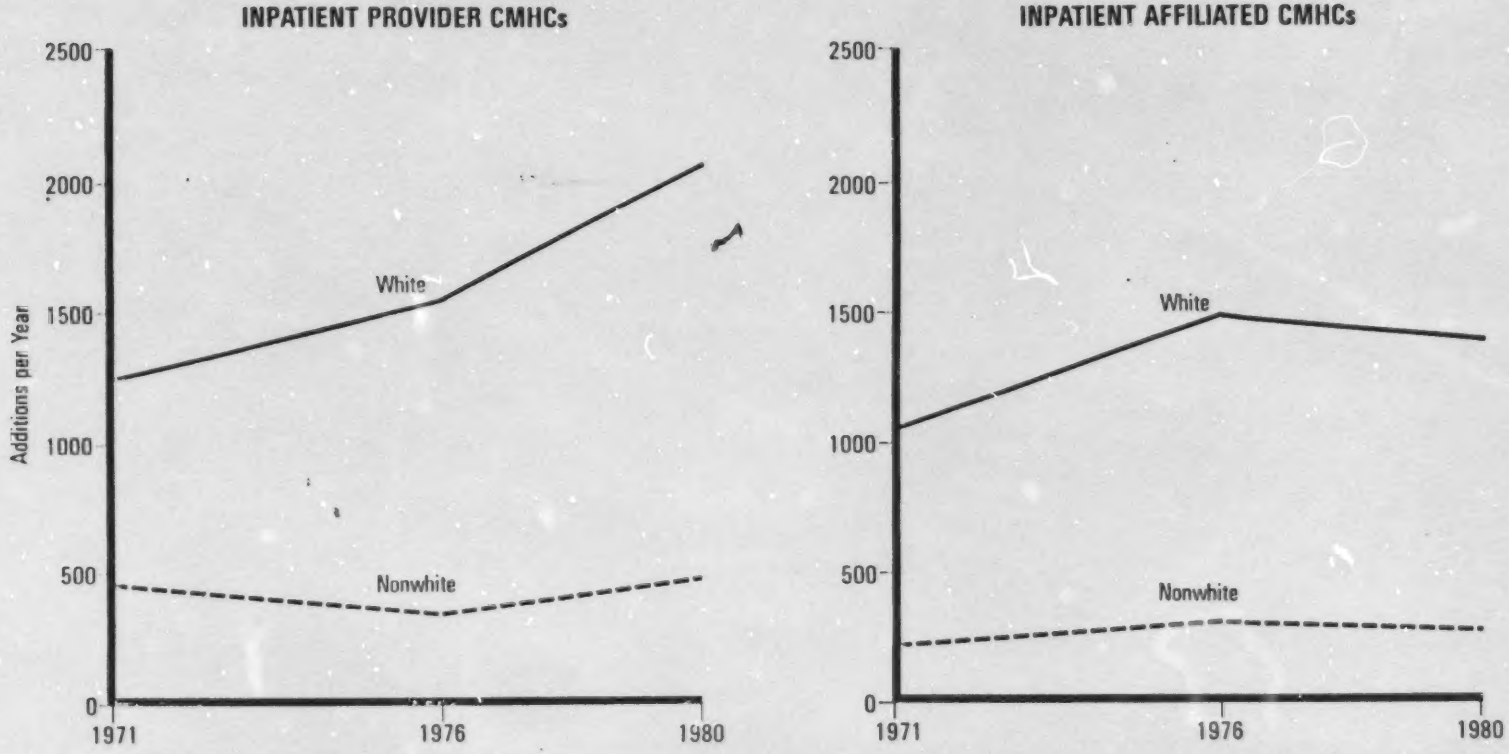

Figure 8
Average number of additions per CMHC, by organizational type, year, and client ethnicity: cohort data.

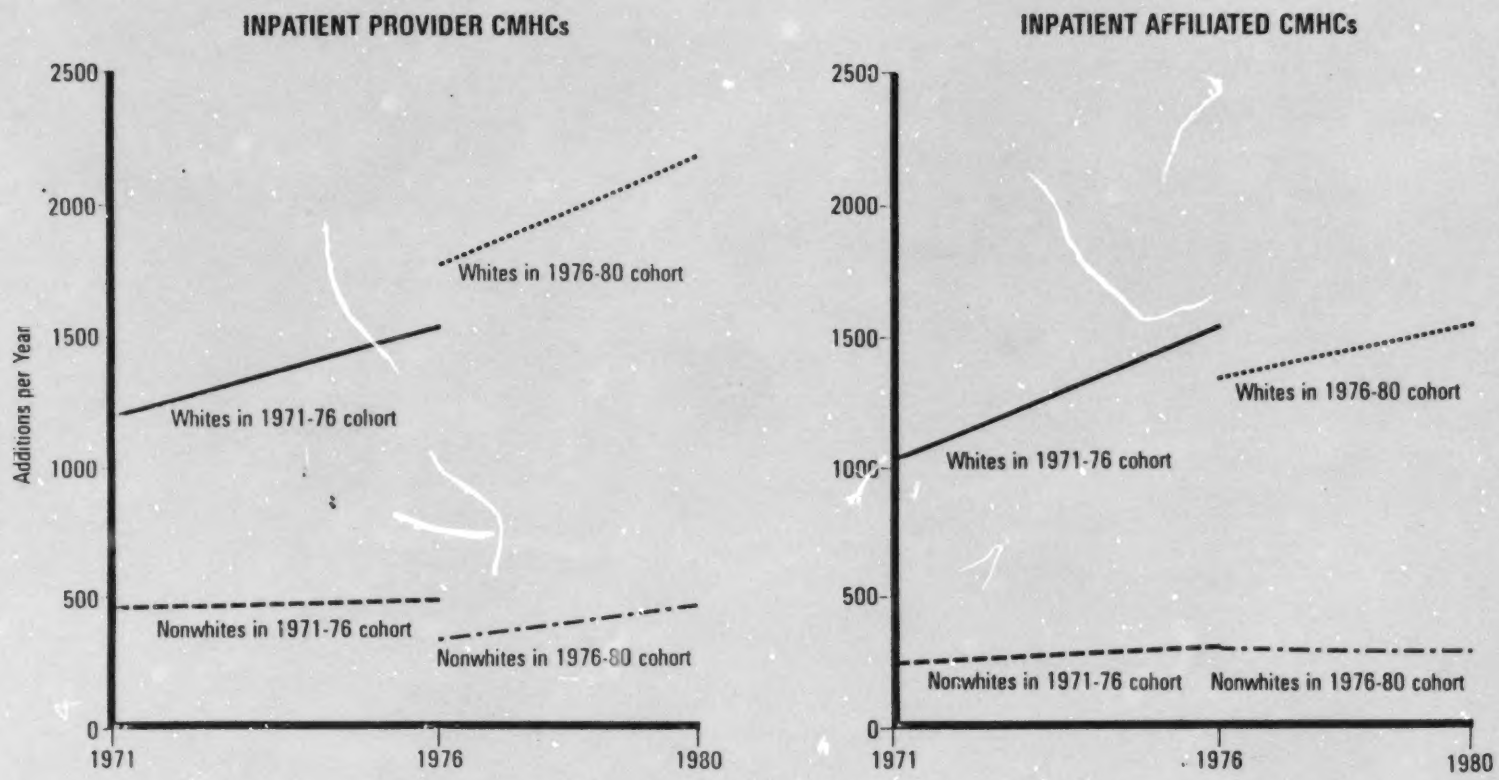

Figure 9
Average episodes per CMHC, by organizational type, year, and type of service.